

Device Configuration:

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COM25 - Tera Term VT
Fichier Edition Configuration Contrôle Fenêtre(W) Aide
*****Before Clibration Process*****
Reg00 =0x12  Reg01 =0x00  Reg02 =0x00  Reg03 =0x00  Reg04 =0xE8  Reg05 =0x00
Reg06 =0x00  Reg07 =0x0B  Reg08 =0xD8  Reg09 =0x00  Reg0A =0x92  Reg0B =0x8D
Reg0C =0x00  Reg0D =0x80  Reg0E =0x7F  Reg0F =0x01  Reg10 =0x00  Reg11 =0x00
Reg12 =0x00  Reg13 =0x00  Reg14 =0x00  Reg15 =0x00  Reg16 =0x00  Reg17 =0x00
Reg18 =0x00  Reg19 =0x00  Reg1A =0x00  Reg1B =0x00  Reg1C =0x00  Reg1D =0x00
Reg1F =0x64  Reg20 =0x94  Reg21 =0x0D  Reg22 =0x6D  Reg23 =0x36  Reg24 =0x7A
Reg25 =0x7D  Reg26 =0x65  Reg27 =0x9F  Reg28 =0x88  Reg29 =0x0C  Reg2A =0x02
Reg2C =0x01  Reg2E =0x01  Reg2F =0x96  Reg30 =0x4C
    
```

Name	Value
Device	0x20000018 &Device
Calibrated	0x00
Info	0x20000019
Status	0x2000001A
ACalComp	0x0D
ACalBemf	0x6D 'm'
Mode	0x20000021
I2C_Bcast_En	0x00
LRA_Period_Avg_Dis	0x00
Line_Reg_Comp_sel	0x00
Tri_pin_func	0x02
Mode	0x03
Control	0x20000022
LRA_ERM	0x01
Control_Loop	0x00
Hybrid_Loop	0x00
Auto_Brk_OL	0x01
Auto_Brk_Into_Stby	0x01
Input_Slope_Check	0x00
Rated_voltage	0x64 'd'
Overdrv_Clamp	0x95 '*'
Gain	0x2000002A
NoiseG_th	0x00
FB_BrkFac	0x03
LoopGain	0x01
BemfGain	0x02
DriveT	0x2000002B
minFreq	0x01
SyncForm	0x00
unUse	0x00
DriveTime	0x1F
AlgoCtrl	0x2000002C
BlankTime	0x08
IdissTime	0x08
unUse	0x00
ODclampTime	0x00
SampleTime	0x03
ZCdet_Time	0x00

F_{actuator}=100Hz => Drive Time should be set to 5ms (cf.Data sheet page 23). But Drive Time Maximum setting allowed is 3.6ms (cf.Data sheet page 54).

Mode: =0x0B

- Broadcast Disable
- Average LRA Periods
- 0% Regulation Compensate
- Interrupt Trigger Function

Control: =0x98

- LRA Actuator Type
- Control Loop (Closed Loop)
- Hybrid Loop Disable (Full Closed Loop)
- Auto Brake in Open Loop Enable
- Auto Brake if Necessary, Enable
- No Input Slop Check

Rate Voltage= 2.23V => 0x64

Clamp Voltage =3.16V => 0x95

Gain: = 0x36

- Noise Gate Threshold (4% off Supply Voltage)
- Brake Factor (4x)
- Loop Gain (Slow)
- BEMF Gain (20x)

Drive Time: =0x9F

- Minimum Frequency Allowed (45Hz)
- Re-Synchronize to Minimum Frequency
- Drive Time (3.6ms)

Algorithm Control:

Reg28h: =0x88

- Blanking Time (150µs)
- Current Dissipation Time(150µs)

Reg29h: =0x0C

- Over Drive Clamp Time (Automatic)
- Sample Time (300µs)
- Zero-Crossing Detection Time (100µs)

Auto-Calibration Time: =1000ms

After Calibration Process:

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*****After Clibration Process*****
Reg00 =0x12   Reg01 =0x00   Reg02 =0x00   Reg03 =0x00   Reg04 =0xE8   Reg05 =0x01
Reg06 =0x43   Reg07 =0x0B   Reg08 =0xD8   Reg09 =0x00   Reg0A =0x92   Reg0B =0x8D
Reg0C =0x00   Reg0D =0x80   Reg0E =0x7F   Reg0F =0x01   Reg10 =0x00   Reg11 =0x00
Reg12 =0x00   Reg13 =0x00   Reg14 =0x00   Reg15 =0x00   Reg16 =0x00   Reg17 =0x00
Reg18 =0x00   Reg19 =0x00   Reg1A =0x00   Reg1B =0x00   Reg1C =0x00   Reg1D =0x00
Reg1F =0x64   Reg20 =0x94   Reg21 =0x0D   Reg22 =0x6D   Reg23 =0x36   Reg24 =0x7A
Reg25 =0x7D   Reg26 =0x65   Reg27 =0x9F   Reg28 =0x88   Reg29 =0x0C   Reg2A =0x02
Reg2C =0x01   Reg2E =0x01   Reg2F =0x96   Reg30 =0x4C
    
```

Name	Value
Device	0x20000018 &Device
Calibrated	0x00
Info	0x20000019
Status	0x2000001A
Diag_Result	0x01
Process_Done	0x01
UVLO	0x00
Over_Temp	0x00
OC_detect	0x00
ACalComp	0x06
ACalBemf	0x75 'u'
DIAG_Z	0x00
CurrentK	0x00
Mode	0x20000023
Control	0x20000024
Rated_voltage	0x64 'd'
Overdrv_Clamp	0x95 '·'
Gain	0x2000002C
DriveT	0x2000002D
AlgoCtrl	0x2000002E
<Enter expression>	

Calibration Process Failed with None Over Temperature or Over Current Detection

After Diagnostic Process:

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*****After Diagnostic Process*****
Reg00 =0x12   Reg01 =0x00   Reg02 =0x00   Reg03 =0x27   Reg04 =0xE8   Reg05 =0x01
Reg06 =0x7A   Reg07 =0x0A   Reg08 =0xD8   Reg09 =0x00   Reg0A =0x92   Reg0B =0x8D
Reg0C =0x00   Reg0D =0x80   Reg0E =0x7F   Reg0F =0x01   Reg10 =0x00   Reg11 =0x00
Reg12 =0x00   Reg13 =0x00   Reg14 =0x00   Reg15 =0x00   Reg16 =0x00   Reg17 =0x00
Reg18 =0x00   Reg19 =0x00   Reg1A =0x00   Reg1B =0x00   Reg1C =0x00   Reg1D =0x00
Reg1F =0x64   Reg20 =0x94   Reg21 =0x0D   Reg22 =0x6D   Reg23 =0x36   Reg24 =0x7A
Reg25 =0x7D   Reg26 =0x65   Reg27 =0x9F   Reg28 =0x88   Reg29 =0x0C   Reg2A =0x02
Reg2C =0x01   Reg2E =0x01   Reg2F =0x96   Reg30 =0x4C
    
```

Name	Value
Device	0x20000018 &Device
Calibrated	0x00
Info	0x20000019
Status	0x2000001A
Diag_Result	0x01
Process_Done	0x01
UVLO	0x00
Over_Temp	0x00
OC_detect	0x00
ACalComp	0x06
ACalBemf	0x8B '·'
DIAG_Z	0x29 ')
CurrentK	0x4C 'L'
Mode	0x20000023
Control	0x20000024
Rated_voltage	0x64 'd'
Overdrv_Clamp	0x95 '·'
Gain	0x2000002C
DriveT	0x2000002D
AlgoCtrl	0x2000002E

The process gives an Average impedance measurement about 180hms.